
 National Transportation Safety Board FACTUAL REPORT AVIATION		NTSB ID: IAD01LA048		Aircraft Registration Number: N974FE	
		Occurrence Date: 04/26/2001		Most Critical Injury: None	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place Plattsburgh	State NY	Zip Code 12901	Local Time 1945	Time Zone EDT	
Airport Proximity: Off Airport/Airstrip		Distance From Landing Facility: 3		Direction From Airport: 170	
Aircraft Information Summary					
Aircraft Manufacturer Cessna		Model/Series 208B		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
<p>Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:</p> <p>On April 26, 2001, at 1945 eastern daylight time, a Cessna 208B, N974FE, was substantially damaged from collision with terrain during a forced landing in Plattsburgh, New York. The airplane was operated as Wiggins Airways flight 7417, doing business as Federal Express. The certificated airline transport pilot was not injured. Visual meteorological conditions prevailed for the flight that originated at the Plattsburgh International Airport (PLB), destined for Albany, New York. An instrument flight rules flight plan was filed for the cargo flight conducted under 14 CFR Part 135.</p> <p>The pilot provided both a telephone interview and a written statement. During the telephone interview, the pilot said the flight was a scheduled cargo flight for Federal Express. He said the preflight, engine start, run-up, taxi and takeoff were "normal". The pilot said that during the climb after takeoff, approximately 1,000 to 1,500 feet above the ground, the airplane's engine "spooled down, slowly and smoothly, like a loss of torque or the propeller going to feather."</p> <p>In a written statement, the pilot said:</p> <p>"Shortly after takeoff, the engine spooled down smoothly and gradually (there was definitely no catastrophic or sudden failure, such as turbine disintegration or bearing failure). I perceived the event as a loss of torque but it might have been propeller blades going to feather. I'm afraid I cannot recall the altitude at which this occurred, but I estimate it was about 1000 to 1500 feet AGL.</p> <p>"[I] checked fuel selector positions (both on), checked fuel quantity indicators (650 lbs. apiece), checked all power lever positions (throttle at take-off power, prop fwd, condition lever hi), and put the ignition switch "on" (or determined that it was still on from takeoff, I'm not sure which). I made a radio call to [Air Traffic Control] reporting the power failure.</p> <p>"The controller pointed out the old airbase to my left and PLB at 6 o'clock. I replied that I would not be able to reach either of those and he said that he would notify emergency personnel. I pulled the emergency power lever out of detent and moved it forward gradually to the full forward position, and did not detect any change in engine operation or sound.</p> <p>"Up to the time when I decided to try the emergency power lever, there were no warning lights shining on the annunciator panel. At this point, with very little time left for planning the forced landing, I considered the forced landing inevitable and made no further attempts to restore power. I moved the prop control to feather for better glide, and to my surprise did not feel any response to that action."</p> <p>The pilot said that he assumed the propeller had not feathered, and that an unfeathered prop would provide aerodynamic braking, and a steeper approach angle. Instead, the pilot said the airplane glided "very well and efficiently" and it caused him to over fly his intended point of touchdown.</p>					
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Narrative (Continued)

He said, "I crossed the field with lots of speed and ran out of room. I touched down and flipped over."

The airplane wreckage was examined at the site on April 27, 2001, by Federal Aviation Administration (FAA) safety inspectors. In a telephone interview, the operations inspector said the airplane came to rest inverted, and the engine was displaced approximately 70 degrees out of alignment.

The inspector said that a review of weight and balance information revealed an accurate depiction of what was loaded on the airplane, and that the airplane had been loaded within limits.

The engine and propeller were removed from the airplane and transported to Burlington, Vermont, for further examination. The airframe was transported to the Plattsburgh International Airport.

The Power Analyzer Recorder System (PARS) computer was removed, and the data was retrieved under the supervision of the FAA primary maintenance inspector (PMI) for Wiggins Airways. Examination of the data revealed that during the most recent takeoff and initial climb, the engine exceeded its torque limit of 1,980 foot-pounds for 99 seconds. The peak torque value over that duration was 2,649 foot-pounds.

On April 30, 2001, a representative of Pratt and Whitney Aircraft under the supervision of the FAA primary maintenance inspector examined the engine and propeller and provided a written report. According to the report:

"The engine had been removed from the airframe by sectioning and mechanical disassembly at the airframe firewall. The external cowling had been removed with the exception of the nose bowl. The other items, including the propeller, exhaust duct, inlet shrouding, and engine mount structure, remained attached. The engine was laying inverted on a flat-bed trailer.

"The propeller blades are in the feather position, with uniform deformation away from the direction of rotation.

"The engine housings display no apparent deformation. The engine related controls and accessories are in place and intact. All external lines and connections were intact except as were sectioned or disassembled for removal of the airframe. The engine pneumatic lines, P3 and Py were in place and intact, with all accessible connections intact and lockwired.

"The forward power control linkage propeller reversing linkage carbon block assembly was not in place. The propeller-reversing lever was riding on the left hand side of the guide pin. The guide pin and lever displayed axial rub marks and polishing on the as-discovered contact faces. The normal as-installed contact faces displayed indications of previous contact, but the faces appeared oxidized and dirty. Inspection access was severely limited due to the nose bowl and prop spinner being in place.

"As discussed yesterday, any disconnection in operation of the forward power control linkage will cause the propeller governor beta control valve to extend, driving the propeller into feather. The propeller deformation is characteristic of the propeller being at feather at the time of impact, being driven by the gas generator with torque being absorbed during the ground contact."

The forward power control linkage propeller reversing linkage carbon block assembly was not recovered.

The engine was examined at the Pratt and Whitney Canada Service Investigation Facility in St. Hubert, Quebec, Canada, on May 29-30, 2001, under the supervision of the Transportation Safety Board (TSB) of Canada. Other than the propeller-reversing lever installed on the left side of the

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guide pin, which was opposite the prescribed right-side position, examination of the engine revealed no mechanical anomalies.

Functional testing of the propeller governor revealed no mechanical anomalies.

The pilot reported the airplane was returned to service on April 23, 2001, after a 100-hour maintenance inspection. He said the airplane logbooks reflected a satisfactory inspection with no discrepancies carried over. The pilot said the airplane had accrued 5 hours of flight time since that date. According to the pilot:

"The plane seemed 100 percent fine to me up until the loss of engine power."

In a written statement, the mechanic who performed the 100-hour inspection described the replacement of the reversing lever carbon block assembly. According to the mechanic:

"The new block was installed to the arm and the retaining snap ring was seated and snug in its groove. During installation of the arm I had to reach down to the block to guide the block onto the channel because it had turned on the first attempt.


"The block was still a slip, but no daylight could be seen between the block and channel. The beta arm was positioned underneath the retaining bar. The center pin was installed with washer and cotter pin. The bolt opposite end of the block was installed with a nut and cotter pin."


During the engine exam at the Pratt and Whitney facility, the TSB investigator supervised the installation of a carbon block assembly on a factory training aid. The reversing lever was installed correctly and incorrectly, in relation to the guide pin. According to the TSB investigator, the incorrect installation "was not difficult to achieve."


According to Pratt and Whitney, installation of the reversing lever on the incorrect side of the guide pin resulted in improper seating and premature wear of the carbon block.

The pilot reported 9,144 hours of flight experience, 137 hours of which were in the Cessna 208B. The pilot said all of his experience in the 208B was in the 90 days prior to the accident.

At 1953, the weather reported at Plattsburgh, New York was clear skies with winds from 250 degrees at 3 knots.

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Landing Facility/Approach Information						
Airport Name Plattsburgh		Airport ID: PLB	Airport Elevation 235 Ft. MSL	Runway Used 17	Runway Length 11759	Runway Width 150
Runway Surface Type: Concrete						
Runway Surface Condition: Dry						
Type Instrument Approach: NONE						
VFR Approach/Landing: Forced Landing						
Aircraft Information						
Aircraft Manufacturer Cessna		Model/Series 208B		Serial Number 099		
Airworthiness Certificate(s): Normal; Utility						
Landing Gear Type: Tricycle						
Homebuilt Aircraft? No		Number of Seats: 2	Certified Max Gross Wt. 8750 LBS	Number of Engines: 1		
Engine Type: Turbo Prop		Engine Manufacturer: P&W Canada	Model/Series: PT6114	Rated Power: 600 HP		
- Aircraft Inspection Information						
Type of Last Inspection 100 Hour		Date of Last Inspection 04/24/2001	Time Since Last Inspection 5 Hours	Airframe Total Time 5993 Hours		
- Emergency Locator Transmitter (ELT) Information						
ELT Installed? Yes		ELT Operated? Yes	ELT Aided in Locating Accident Site? No			
Owner/Operator Information						
Registered Aircraft Owner Federal Express Corporation		Street Address 3191 Tchulahoma Qa 5433				
		City Memphis	State TN	Zip Code 38118		
Operator of Aircraft Wiggins Airways		Street Address 3191 Tchulahoma QA 5433				
		City Memphis	State TN	Zip Code 38118		
Operator Does Business As: Federal Express				Operator Designator Code:		
- Type of U.S. Certificate(s) Held:						
Air Carrier Operating Certificate(s): On-demand Air Taxi						
Operating Certificate:			Operator Certificate:			
Regulation Flight Conducted Under: Part 135: Air Taxi & Commuter						
Type of Flight Operation Conducted:						
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First Pilot Information																																																																																													
Name		City		State	Date of Birth	Age																																																																																							
On File		On File		On File	On File	46																																																																																							
Sex: M	Seat Occupied: Left	Principal Profession: Civilian Pilot		Certificate Number: On File																																																																																									
Certificate(s): Airline Transport																																																																																													
Airplane Rating(s): Multi-engine Land; Single-engine Land; Single-engine Sea																																																																																													
Rotorcraft/Glider/LTA: None																																																																																													
Instrument Rating(s): Airplane																																																																																													
Instructor Rating(s): Airplane Multi-engine; Airplane Single-engine; Instrument Airplane																																																																																													
Type Rating/Endorsement for Accident/Incident Aircraft? No				Current Biennial Flight Review? 02/07/2001																																																																																									
Medical Cert.: Class 2		Medical Cert. Status: Valid Medical--w/ waivers/lim.		Date of Last Medical Exam: 12/14/2000																																																																																									
<table border="1"> <tr> <th>- Flight Time Matrix</th> <th>All A/C</th> <th>This Make and Model</th> <th>Airplane Single Engine</th> <th>Airplane Multi-Engine</th> <th>Night</th> <th colspan="2">Instrument</th> <th>Rotorcraft</th> <th>Glider</th> <th>Lighter Than Air</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Actual</td> <td>Simulated</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Total Time</td> <td>9144</td> <td>137</td> <td>5411</td> <td>3733</td> <td>2132</td> <td>2841</td> <td></td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Pilot In Command(PIC)</td> <td>9144</td> <td>137</td> <td>5411</td> <td>3733</td> <td>2132</td> <td>2841</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instructor</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 90 Days</td> <td>137</td> <td>137</td> <td>0</td> <td></td> <td>41</td> <td>31</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 30 Days</td> <td>48</td> <td>48</td> <td>48</td> <td></td> <td>9</td> <td>10</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 24 Hours</td> <td>2</td> <td>2</td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air							Actual	Simulated				Total Time	9144	137	5411	3733	2132	2841		0	0	0	Pilot In Command(PIC)	9144	137	5411	3733	2132	2841					Instructor											Last 90 Days	137	137	0		41	31					Last 30 Days	48	48	48		9	10					Last 24 Hours	2	2	2							
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Seatbelt Used? Yes		Shoulder Harness Used? Yes		Toxicology Performed? No		Second Pilot? No																																																																																							
Flight Plan/Itinerary																																																																																													
Type of Flight Plan Filed: IFR																																																																																													
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Same as Accident/Incident Location			PLB	1940	EDT																																																																																								
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Source of Briefing: National Weather Service																																																																																													
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Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
PLB	1953	EDT	371 Ft. MSL	3 NM	170 Deg. Mag.
Sky/Lowest Cloud Condition: Clear				Ft. AGL	Condition of Light: Night/Bright
Lowest Ceiling: None			Ft. AGL	Visibility: 10 SM	Altimeter: 30.08 "Hg
Temperature: 9 °C	Dew Point: -4 °C	Wind Direction: 170		Density Altitude: -509 Ft.	
Wind Speed: 6	Gusts:	Weather Conditions at Accident Site: Visual Conditions			
Visibility (RVR): Ft.	Visibility (RVV) SM	Intensity of Precipitation:			
Restrictions to Visibility: None					
Type of Precipitation: None					

Accident Information					
Aircraft Damage:		Aircraft Fire:		Aircraft Explosion	
Classification:					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot				1	1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -				1	1
Other Ground					
- GRAND TOTAL -				1	1

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Administrative Information		
Investigator-In-Charge (IIC) Brian C. Rayner		
Additional Persons Participating in This Accident/Incident Investigation: Mike Bossert Inspector FAA Albany, NY 12110 David McNair Investigator Transportation Safety Board Canada, Wayne Gelfand Engineer Federal Express Memphis, TN Emile Lohman Cessna Aircraft Company Wichita, KS Thomas Berthe Investigator Pratt and Whitney Canada,		
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